

Technical Capabilities University of Washington

Center for Experimental Nuclear Physics and Astrophysics

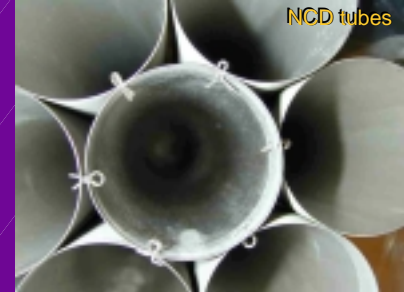
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STAR TPC visualization

- Low Level counting and Particle I.D.
- Class-100 clean room
- 10,000 channel data acquisition
- Visualization software
 - *Possible application:* TPC for examining a large set of small samples for anomalous α activity.
- Distributed, low cost, internet based monitoring
 - *Possible application:* Standard radiation monitors for containers on container-ships. Monitor in transit.



- Van de Graaff accelerator and standard nuclear measuring techniques.
- Ability to measure gravity gradients
 - *Possible application:* locate activity underground or in caves



CENPA

Facility:

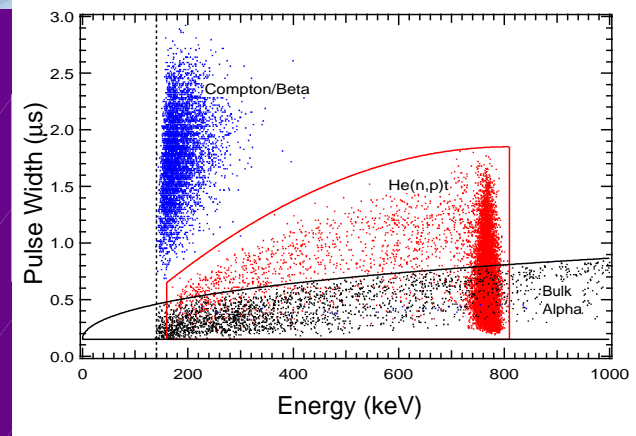
- Large DOE supported laboratory on campus of U.W.
- Tandem light and heavy ion accelerator
- Prototyping machine shops
- Electronics shop with surface mount capability
- Clean room (Class 100)
- Gravity Lab

Strength:

- Uniquely broad synergistic physics background
- Innovative construction of instruments and detectors
- Training new researchers for the field
- Detection of ultra-weak signals
- Precision Measurements
- Software developments
- Fast and practical response to new ideas

Recent examples of creative accomplishments:

- Solar neutrinos:
 - Data acquisition and visualization
 - neutral current detectors
- $^7\text{Be}(\text{p},\gamma)$ S-factor
- Most precise measurement of Newton's constant
- Precise experimental searches for breakdown of gravity



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